

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Listing of Claims:

1. (Currently Amended) A method for enabling an introduction of a 200kHz GSM-type network into a TDMA system having a bandwidth that is substantially less than a 2.5MHz bandwidth normally employed for GSM-type networks, comprising the steps of:

providing a 52-multiframe containing 12 blocks of four consecutive frames, two idle frames, and two channels used for control channel purposes, said frames comprising a number plurality of sequentially numbered timeslots; and

rotating control channels belonging to a serving time group over every other non-sequential, alternate timeslot number numbers within a frame.

2. (Currently Amended) The method as in claim 1, wherein the rotation occurs over odd timeslot numbers in a repeating sequence given as 7, 5, 3, 1, 7, 5, ..., etc. and where the rotation occurs between frame numbers (FN) mod 52 = 3 and 4.

3. (Previously Presented) A method to enable an introduction of a 200kHz GSM-type network into a TDMA system having a bandwidth that is substantially less than a 2.5MHz bandwidth normally employed for GSM-type networks, comprising:

providing a 52-multiframe containing 12 blocks of four consecutive frames, two idle frames, and two channels used for control channel purposes, each of said frames comprising a number of timeslots; and

rotating control channels belonging to a serving time group over every other timeslot

number,

wherein a mapping of the control channels on timeslot numbers is defined by the following formula:

For $0 \leq \text{FN} \bmod 52 \leq 3$, $\text{TN} = ((6 \times ((\text{FN} \bmod 52) \bmod 4)) + 1 + (2 \times \text{TG})) \bmod 8$; and

For $4 \leq \text{FN} \bmod 52 \leq 51$, $\text{TN} = ((6 \times ((\text{FN} \bmod 52) \bmod 4)) + 7 + (2 \times \text{TG})) \bmod 8$,

where TG is a time group value.

4. (Previously Presented) The method as in claim 1, wherein information specifying at least the rotation direction is signalled to the mobile station in a downlink synchronization channel.

5. (Currently Amended) A wireless TDMA digital communications system, comprising:

at least one mobile station; and

a plurality of base transceiver stations individual ones of which are capable of transmitting packet data to, and receiving packet data from, said mobile station using a 52-multiframe, said frames comprising a ~~number~~ plurality of sequentially numbered timeslots, wherein individual ones of said base transceiver stations rotate the transmission of control channels belonging to a serving time group over ~~every other non-sequential, alternate~~ timeslot number numbers within a frame for enabling said mobile station to perform reselection measurements on neighboring base transceiver stations ~~without dropping traffic~~.

6. (Previously Presented) The system as in claim 5, wherein the rotation occurs between frame numbers $(\text{FN}) \bmod 52 = 3$ and 4.

7. (Previously Presented) A wireless TDMA digital communications system, comprising:

at least one mobile station; and

a plurality of base transceiver stations individual ones of which are capable of transmitting packet data to, and receiving packet data from, said mobile station using a 52-multiframe, said frames comprising a number of timeslots, wherein individual ones of said base transceiver stations rotate the transmission of control channels belonging to a serving time group over every other timeslot number for enabling said mobile station to perform reselection measurements on neighboring base transceiver stations without dropping traffic,

wherein a mapping of the control channels on timeslot numbers is defined by the following formula:

For $0 \leq FN \bmod 52 \leq 3$, $TN = ((6x((FN \bmod 52) \bmod 4)) + 1 + (2xTG)) \bmod 8$; and

For $4 \leq FN \bmod 52 \leq 51$, $TN = ((6x((FN \bmod 52) \bmod 4)) + 7 + (2xTG)) \bmod 8$,

where TG is a time group value.

8. (Previously Presented) The system as in claim 5, wherein information specifying at least the rotation direction is signalled to the mobile station in a downlink synchronization channel.

9. (Currently Amended) The system as in claim 5, wherein the rotation of the control channels occurs in odd timeslot numbers in a repeating sequence given as 7, 5, 3, 1, 7, 5, ..., etc.

10. (Currently Amended) A network component of a wireless TDMA communications system, comprising circuitry to transmit information to a mobile station using a 52-multiframe, where frames comprise a number of plurality of sequentially numbered timeslots, said circuitry

operating to rotate the transmission of a control channel belonging to a serving time group over odd timeslot numbers in a repeating sequence given as 7, 5, 3, 1, 7, 5, ..., etc., where the rotation occurs between two predetermined frame numbers (FNs).

11. (Previously Presented) The network component of claim 10, where the rotation occurs between FN mod 52 = 3 and 4.

12. (Currently Amended) A network component of a wireless TDMA communications system, comprising circuitry to transmit information to a mobile station using a 52-multiframe, where frames comprise a number plurality of sequentially numbered timeslots, said circuitry operating to rotate the transmission of a control channel belonging to a serving time group over odd timeslot numbers in a repeating sequence given as 7, 5, 3, 1, 7, 5, ..., etc., where the rotation occurs between two predetermined frame numbers (FNs), and where a mapping of the control channels on timeslot numbers (TNs) is defined by:

For $0 \leq \text{FN} \bmod 52 \leq 3$, $\text{TN} = ((6x((\text{FN} \bmod 52) \bmod 4)) + 1 + (2x\text{TG})) \bmod 8$; and
For $4 \leq \text{FN} \bmod 52 \leq 51$, $\text{TN} = ((6x((\text{FN} \bmod 52) \bmod 4)) + 7 + (2x\text{TG})) \bmod 8$,
where TG is a time group value.

13. (Currently Amended) A mobile station for use in a wireless TDMA communications system, comprising circuitry to receive information from a 52-multiframe, where frames comprise a number plurality of sequentially numbered timeslots, said receive circuitry operating to synchronize to the rotation of the transmission of a control channel belonging to a serving time group over odd timeslot numbers in a repeating sequence given as 7, 5, 3, 1, 7, 5, ..., etc., where the rotation occurs between two predetermined frame numbers (FNs).

14. (Currently Amended) ~~The mobile station of claim 13~~ A mobile station for use in a wireless TDMA communications system, comprising circuitry to receive information from a 52-multiframe, where frames comprise a plurality of sequentially numbered timeslots, said receive circuitry operating to synchronize to the rotation of the transmission of a control channel belonging to a serving time group over odd timeslot numbers in a repeating sequence given as

7, 5, 3, 1, 7, 5, ..., where the rotation occurs between two predetermined frame numbers (FNs),
where a mapping of the control channels on timeslot numbers (TNs) is defined by:

For $0 \leq \text{FN} \bmod 52 \leq 3$, $\text{TN} = ((6 \times (\text{FN} \bmod 52) \bmod 4)) + 1 + (2 \times \text{TG}) \bmod 8$; and

For $4 \leq \text{FN} \bmod 52 \leq 51$, $\text{TN} = ((6 \times ((\text{FN} \bmod 52) \bmod 4)) + 7 + (2 \times \text{TG}) \bmod 8$,

where TG is a time group value.